

Abstract of the Disclosure

0052        A liquid crystal on silicon structure that incorporates integrated spacers and silicon light valves and a method for such fabrication are disclosed. The structures includes a silicon substrate that has a multiplicity of pixel electrodes formed on a top surface. A multiplicity of integrated spacers formed of an insulating materials on the top surface of the silicon substrate in-between the multiplicity of pixel electrodes, and a multiplicity of silicon light valves formed on a top surface of the silicon substrate for orienting liquid crystal molecules. A glass substrate that is optically transparent with an optically transparent electrode layer on a bottom surface is positioned juxtaposed to and over the silicon substrate supported by the integrated spacers to form a sealed cavity by engaging a perimeter seal surrounding the two substrates. A liquid crystal is used to fill the sealed cavity forming the present invention liquid crystal on silicon structure.

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